



## Math Summer Review Homework Geometry

Please complete the problems below and bring them with you the first day of class.  
If you need more practice or information about these concepts,  
please visit: <http://www.williston.com/summer-coursework>

### Fractions

1. Evaluate the following

a)  $\left(\frac{4}{3}\right)\left(\frac{15}{24}\right)$

b)  $\frac{5}{6} - \frac{3}{4}$

c)  $\frac{25}{10} + \frac{36}{24}$

### Solving equations

2. Solve the following for x:

a)  $3(x-7) + 2x = 4$

b)  $15 - 6 = 4 - 5x$

c)  $5x + 3y = 8$

d)  $5y - 3x = y + x + 16$

### Ratio and Proportion

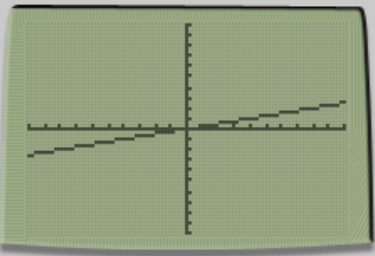
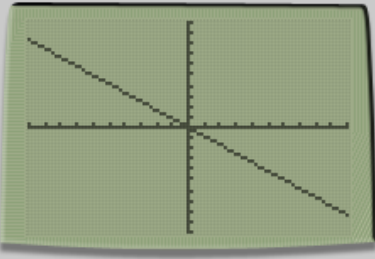
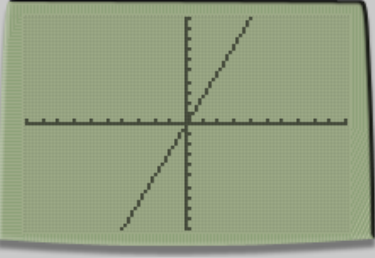
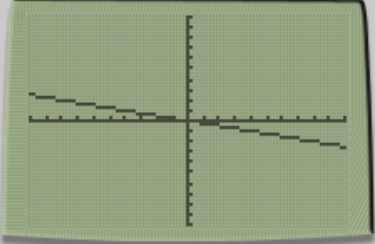
3. Solve for x.

a.  $\frac{x}{12} = \frac{10}{36}$

b.  $\frac{2x}{3} = \frac{x+2}{2}$

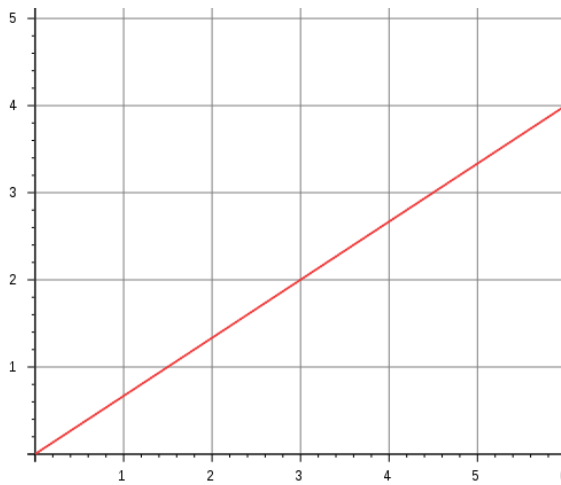
Slope

4. Match the graph pictures to the slopes (write in the correct roman numeral for each slope)

a) slope = $1/4$ picture: ____	i. 
b) slope = $-1/4$ picture: ____	ii. 
c) slope = $-5/6$ picture: ____	iii. 
d) slope = $10/4$ picture: ____	iv. 

5. Find the slope of the line

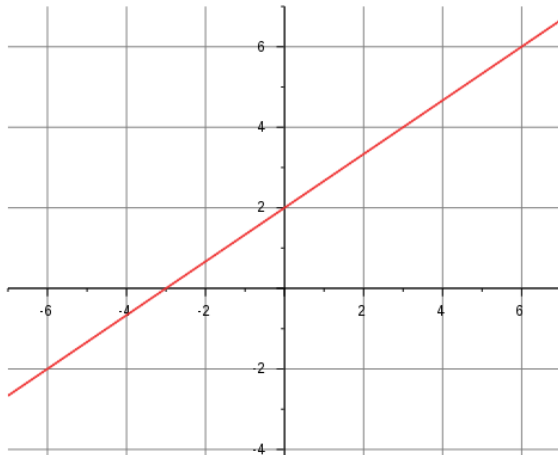
Slope = \_\_\_\_\_



6. For line  $g$  with equation  $y = (5/6)x + 3$ , find the following:
- Slope of a line parallel to  $g$  :
  
  
  
  
  
  - Slope of a line perpendicular to  $g$ :
7. The grade of a road is its slope, given as a percent. For example, a road with a 6% grade has a slope of  $6/100$ . It rises 6 feet for every 100 feet of horizontal run. Describe a 100% grade. Do you think you could drive up it? Is it possible for a grade to be greater than 100%?

Equation of a Line

8. Find the equation of the line below.



9. Find the equation of the line that runs through points  $(-2, 6)$  and  $(4, -2)$ .

Formulas

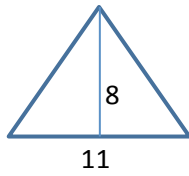
Using the formulas in the box to the right, complete the following problems.

<b>Distance</b> = rate * time	(d = rt)
<b>Area of a triangle</b> = $\frac{1}{2}$ base * height	(A = $\frac{1}{2}$ bh)
<b>Area of a rectangle</b> : base * height	(A = bh)

10. A car travels 963km in 11 hours. What was the car's rate of speed in km/hr?

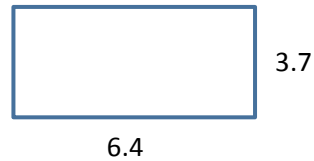
11. Find the area of the two figures below.

a)



Area of triangle: \_\_\_\_\_

b)



Area of rectangle: \_\_\_\_\_

Unit analysis

12. Williston's track team competed in the New England New England Intercollegiate Amateur Athletic Association Track and Field competition in May. If 23 schools participated in the 4 x 800m relay (where each of the four teammates runs an 800m leg), how many total miles were run by the teams? Round to the nearest tenth of a mile. (1 mile  $\approx$  1609.3 meters)

13. If I stack 14 blocks on top of each other that are each 5 inches high, how high will the tower be in feet? (Include a fraction of a foot if necessary)